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ABSTRACT

A summary and critique is presented on research of effective schools, based primarily on a review of the reviews written about that work. It is pointed out that the majority of research findings came from studies of elementary schools and focused upon the characteristics of effective schools for minority and poor students. Most research reviewed for this analysis was exploratory and descriptive, aiming to find effective schools and then deducing characteristics associated with effectiveness. For most studies reviewed, researchers did not develop comprehensive, systematic, and detailed programs with implementation guides for school improvement. However, in many studies, identification was made of features of effective programs. One example noted is of a school staff committed to excellence with high expectations for students and strong administrative leadership. It is suggested that the attitudes, processes, and techniques which characterize effective elementary schools have relevance for secondary schools as well, in spite of differences in organizational structure and educational goals. The appendix provides lists of effective school characteristics which were culled from the reviewed research. (JD)

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A REVIEW OF EFFECTIVE SCHOOLS RESEARCH: THE MESSAGE FOR SECONDARY SCHOOLS

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What is an effective secondary school for minority and poor students? A decade-long quest to discover the characteristics of effective schools has been curiously negligent of secondary schools (Firestone and Herriott, 1982; Edmonds, 1982 Airlie House; Purkey and Smith, 1982; Tomlinson, 1982). With the exception of Rutter et al. (1979) it is only within the past year or two that researchers have turned their attention to the complexity of discovering and describing effectiveness above grade six (Sleeter, 1982). Perhaps, as Mann (1980) notes, researchers have attended to elementary schools because there is a "developmental premium on early intervention" and, "as institutions, elementary schools seem more malleable." Certainly it has not been because educators and researchers are sanguine about secondary schools; many local efforts and research projects are concerned with improving secondary schools. However as Edmonds notes (1982, Airlie House) "they are not based on the fundamental and shared premises that characterize the programs of improvement in elementary and intermediate schools." (p. 3)

Whatever the reasons, the dearth of research on effective secondary schools sharply limits a review of the work. This is not to say that research from elementary schools is without significance for, or goes un-noted by those concerned with secondary schools. On the contrary, research findings from elementary schools seem to be 1) shaping the design of a number of incipient secondary improvement efforts, 2) influencing the content of such programs, and 3) guiding the process of implementation. Therefore, it is sensible to review the research findings culled from elementary schools prior to outlining ways in which this research is being applied at the secondary level (see volume II for examples of secondary applications).

This review begins then with a brief summary and critique of the effective schools research, based primarily on a review of the reviews written about that work. The next section describes broad characteristics of the programs developed in response to the research, and the final section considers the applicability of this research to efforts to create effective secondary schools. In particular we consider features of secondary schools that distinguish them from their elementary counterparts, noting where the fit between elementary-based research and secondary schools is good, where it is problematic, and what questions remain to be answered.

EFFECTIVE SCHOOLS: THE RESEARCH BASE

The effective school research has been reviewed extensively in the past few years, giving at times the impression of an enormous research foundation (Austin, 1981; Behling, 1981; Clark, 1980; Edmonds, 1979, 1982; Mann, 1980; Mullikan, 1982; Purkey and Smith, 1982; Ralph and Fennessey, 1982; Rutter, 1979; Shoemaker and Fraser, 1981; Squires, 1980). However, as Purkey and Smith (1982) point out, the studies use different designs, methods and measures of effectiveness making comparisons difficult, and the number of studies belies the small number of schools actually represented by the original research. The scale of the reform it has spawned is larger than most implementation efforts that aimed to improve a single aspect of a school's program (i.e., reading or math instruction), and almost seems out of proportion to the size of the research base (Gersten et al., 1982). What the studies had in common that influenced their redemption was the ability to locate schools that worked; schools in which poor and minority students were achieving as well as their middle-class counterparts.

The work grew out of a fervent desire to demonstrate that schools could

make a difference. After Coleman (1966) and then Jencks (1972), school people seemed convinced that they could not make a difference in the lives of poor and minority children. Some educators may have felt "off the hook" by this finding, but for most it was debilitating to be told that the work they were pursuing would come to nought. After more years of disappointing results from using federal resources to improve educational outcomes, school people and even confirmed reformers were losing faith. It appeared that in a world in which discrimination, economic stratification, unemployment and family instability remained, school could not make a difference. Why should educators keep trying?

The reason was success stories: schools that did make a difference; inner city schools in which achievement scores were at or above national norms. George Weber "had seen for [himself] one inner-city school and had heard reports of several others in which reading achievement was not relatively low, in which it was, indeed about the national average or better." (in Shoemaker and Fraser, 1981) He located three others and described elements common to the these four effective schools. Others began to do the same and a flurry of forays to locate and describe "effective schools" began. With the discovery of effective elementary schools in New York (1971); Maryland (Austin, 1978), and Michigan (Brookover and Lezotte, 1978; Edmonds, 1979) faith was being rekindled.

These researchers did not doubt Coleman's conclusion that achievement was related to SES; but they rejected the corollary that schools therefore could not make a difference.

The research was exploratory and descriptive, aiming to find effective schools and then deduce characteristics associated with effectiveness.

Individual schools seemed the appropriate unit of investigation for several reasons. First, in many respects the search for effective schools was a response to Coleman and Jencks who were talking about "school" effects. Second, the finding that school climate was associated with achievement pointed to the importance of the social system of the entire school. It was not the individual teacher, or the individual classroom, but the system of norms, beliefs, attitudes, formal and informal organization that mattered. Coleman came to a related conclusion when he found that academic achievement was strongly related to student attitude, particularly the student's sense of control of the school environment.[1/] Third, in reviewing the literature on change in schools, Passalacqua (1981) concluded that "unless the school as a functioning social system is the focus of social change, program adoption and effective reform are not likely to occur" (p. 36). Finally, research on teacher expectations and their influence on school norms further supported the emphasis on the school as a social unit.

Effectiveness was defined quite narrowly in most research as "a highly circumscribed, quantitative measure of school improvement" based on basic skills acquisition" and measured "by recording annual increases in proportionate mastery in the lowest social class." (Edmonds, 1982, Airlie House, p. 1) The measure of effectiveness was narrowly drawn and cognitive. It referred to instructional outcomes over which the schools might reasonably exercise some influence.

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1. Along similar lines, the Safe Schools Study reported a relationship between sense of control/futility and the amount of violence in a school. That study found "Student violence is higher in schools where more students say that they cannot influence what will happen to them--that their future is dependent upon the actions of others or on luck, rather than on their own efforts." (reported in Squires, 1980, p. 9). This finding supports the conclusion that the total climate of the school is important in understanding effectiveness however it is measured.

Each study generated a slightly different set of characteristics (Austin, 1979; Brookover and Lezotte, 1977; Edmonds, 1979; and Weber, 1971; see Appendix A for a sample of these sets of characteristics), but the one that has become dominant in the field is Edmonds' (1982, Airlie House for a recent version). He writes that effective schools are characterized by:

1. The leadership of the principal notable for substantial attention to the quality of instruction;
2. a pervasive and broadly understood instructional focus;
3. an orderly, safe climate conducive to teaching and learning;
4. teacher behaviors that convey the expectation that all students are expected to obtain at least minimum mastery; and
5. the use of measures of pupil achievement as the basis for program evaluation.

These characteristics have been derived from research in elementary schools. There is one study of effective secondary schools (Rutter et al., 1979), and it too concludes that the social system of the school and the climate that it generates are related to student outcomes. Rutter found that effective schools were those in which "Lessons were prepared in advance, the whole class was taught, pupils were kept actively engaged, high expectations were the order of the day, school personnel modeled good behavior, students obtained feedback about acceptable behavior, and school personnel used a lot of praise." (in Behling, 1981, p. 10)

The characteristics identified by Edmonds and others form the backbone of most subsequent efforts to apply the research to school improvement, but they come with some serious disclaimers. Both researchers and critics of the work suggest a cautious interpretation of several of the research findings. One caution centers on the issue of causality. The characteristics listed above and those presented in Appendix A are <u>associated</u> with effectiveness as

measured by scores on standardized tests. The research was not designed to test whether the characteristics cause effectiveness and no causal links can be assumed (Cohen, 1981; Edmonds, 1982; Purkey and Smith, 1982; Squires, 1980). This has serious implications for what might result from policy decisions to create the characteristics in schools. If their presence does not cause students to achieve at higher levels, then the effort to create them in schools should not be expected to lead to improved test scores. Keeping this possibility in mind, some critics caution that:

> Because of the inadequate measures and the uncertainty of the empirical findings, efforts to formulate policy recommendations on the bases of this (effective schools) research are scientifically premature; they are founded mainly on personal faith and testimony rather than scientific theory and supporting evidence. (Ralph and Fennessey, 1982, p. 3)

But for most, there is so much face validity to the findings and so fervent a desire to be successful, that even prudent researchers are plunging ahead. Purkey and Smith (1982), after expressing many reservations conclude:

> There is a good deal of common sense to the notion that a school is more likely to have relatively high reading or math scores if the staff agree to emphasize those subjects, are serious and purposeful about the task of teaching, expect students to learn, and create a safe and comfortable environment in which students accurately perceive the school's expectations for academic success and come to share them. Such a mixture of characteristics creates a climate that would encourage, if not guarantee, success in any endeavor from teaching dance, to building a winning football team, to improving children's knowledge of American history. (p. 28)

It is hard to disagree, even without research confirmation.

A second caution points to how little we know about the relative importance of each of the individual characteristics. Researchers do not know anything about their rank order importance or which are essential for effectiveness. In addition there is disagreement about which characteristics really matter: some are seen as "indispensable" by one researcher and disregarded by others

(D'Amico, 1982). As a compromise, most recommend, as does Edmonds, that "to advance effectiveness a school must implement all of the characteristics at once." (1982, p. 6) Millikan (1982), in recent work with administrators in Pennsylvania, displayed the uncertainty more dramatically, prefacing the list of important characteristics with the following:

> THE READER SHOULD NOTE THAT SOME OF THE FINDINGS CONFLICT. THIS ONLY ENHANCES THE FACT THAT ALL THESE FINDINGS MUST BE VIEWED AS A WHOLE, AND DECISIONS MUST BE MADE ABOUT THE KINDS OF THINGS THAT ARE MOST LIKELY TO IMPACT LOCALLY.
> (p. 2, Capitals in the original)

The quote embodies the dilemma faced by school people trying to use the research. On the one hand they are told that the entire set of characteristics is necessary; on the other they are told that they will have to make some decisions about the relative importance of the characteristics because different studies have generated different lists. The lack of a firm empirical base becomes apparent in the process of trying to make decisions about how to proceed at the local level.

Yet another limitation of the research is that it provides no guidance for creating the desired effective school characteristics in staff or schools. The research points out what is desirable, but says little about what the terms mean and how to implement them. For example, "school climate" is a central metaphor in the effective schools research and an effective school has to have a good one. But what is a good, healthy, constructive climate? Is it the same in Detroit as it is in South Dakota? And how do you create it?

More specifically, how do local practitioners use the research to define the appropriate behaviors of a principal? There is contradictory data on the behaviors of effective principals. Austin (1979) found that the effective principal paid a great deal of attention to instruction; Spartz (1977) found

that effective principals emphasized the administrative side of their jobs (in Purkey and Smith, 1982). Edmonds says that the leadership of the principal may not always be that important:

> Some schools are instructionally effective for the poor because they have a tyrannical principal who compels the teachers to bring all children to a minimum level of mastery of basic skills. Some schools are effective because they have a self-generating teacher corps that has a critical mass of dedicated people who are committed to be effective for all the children they teach. Some schools are effective because they have a highly politicized Parent Teacher Organization that holds the schools to close instructional account. The point here is to make clear at the outset that no one model explains school effectiveness for the poor or any other social class subset. (Edmonds, 1979, p. 31-32)

And even if we knew which kind of principal was appropriate in a particular setting, there is little knowledge about how to forge that principal out of the one who already has the job.

Finally, there are cautions arising from the design of some studies. Most rely on a very small number of schools. The case studies represent a total of 43 schools; those studies relying on the identification of statistical outliers use from two to twelve schools in their final samples.[2/] Small sample size makes generalizing risky. In the outlier studies (for example Austin's work) it leads to "the possibility that the characteristics which appear to discriminate between high and low outliers are chance events." (Purkey and Smith, 1982, p. 8) Ralph and Fennessey (1982) point out that the studies do not always use comparable measures of effectiveness, further limiting the persuasiveness of the findings. Hawkins (1982), Huitt, Caldwell and Segars (1982), Frechtling (1982), and Myerberg (1982) among others are

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2. Outliers are schools in which achievement scores are statistically determined to be much higher or lower than would be expected given the SES of the student population.

addressing this problem by developing more accurate and comparable ways of measuring both effectiveness and SES.

The Rutter (1979) study of secondary schools has also come in for its share of criticism. Cuttance (1979) takes issue with the inferences drawn from the statistical analysis, noting that little can be said of the magnitude of the school effect reported because the analysis used was a log linear model. He cautions against considering the research as other than exploratory. Purkey and Smith (1982) note that only two of Rutter's schools can be called academically effective, an important caveat when relating the work to an American context in which academic achievement has been the core measure of effectiveness. Rutter himself cautions against making quick leaps from the findings to practice. For example, in talking about the amount of time spent on lessons, certainly a measure of instructional focus, he points out that:

> The measure of time spent on the lesson topic was not significantly associated with academic success. An attentive well-behaved class provides the opportunity for effective teaching and productive learning. What use is made of this opportunity, however, will be crucial in determining just what and how much the children learn.
> (Rutter, 1979, p. 116)

Nonetheless, the similarity of the findings--regardless of the size of the sample or the method of study or the measure of effectiveness--have been convincing. In spite of their own reservations, researchers have developed programs of school improvement based on findings from the effective schools research.

EFFECTIVE SCHOOLS: PROGRAMS OF IMPROVEMENT

As we noted earlier, the findings--the set of essential characteristics--do not come complete with a strategy for creating them in schools. There is no recipe, no step-by-step road map leading from ineffective to effective,

and those responsible for the research do not really suggest that there is one. They are quite aware that the path to effectiveness has yet to be cleared. Edmonds, for example has "enormous" confidence in the research conclusions themselves, yet is less confident about how to "translate what you believe to be sound research conclusions into a program whose intent is to modify the interaction between schools and children in schools who ordinarily do not profit from the way we do things." (Edmonds, Oct. 31, 1980)

As a result, there is no single "effective schools program", packaged and ready for delivery. The effective schools researchers have not developed comprehensive, systematic, detailed programs with implementation guides, but have instead urged others to develop their own, using their own ingenuity (Purkey and Smith, 1982). One result is that there are very nearly as many different "effective schools programs" as their are "developers", and developers range from the old developer network of labs and centers to new private entrepreneurs, state departments of education, local districts and individual schools. This means that the programs spawned by the research are quite different from innovations of recent years: no packaged program is being imported by schools in the hope that improvement will result from doing something to or for teachers. Furthermore, there is no offical stamp of approval to guarantee that what is being done will work: the validation arm of the federal education agency has yet to certify effective schools programs. The programs are also different in that they place considerably more emphasis on the role of process than old programs did. They reflect an awareness of the importance of process born out of the previously unsuccessful improvement efforts which only nodded in that direction. As Mann writes:

> I think that in telling us what has not worked there are very strong hints about how to do things differently. . . .

> Successfully implementing an instructionally effective school requires that we maximize user self-interest, natural entry points, heuristic and eclectic management, and that we honor the implications of learning theory for adults just as for children (e.g., clear tasks, sense of fate control, client choice, early success, non-aversive feedback, selective reinforcement, etc.). (Mann, 1981, p.)

This orientation to change has meant that improvement programs called effective schools can vary widely in the specificity of their components. Some describe broad goals and strategies leaving it up to locals to shape their own programs. Others provide detailed procedures and structures for specific actions. The rationale behind this approach rests 1) on the fact that research says little about how to achieve the characteristics, and 2) on the knowledge gained from practice that "strategies that enhance adoption in one school setting may not be optimal for program adoption in another school. . . . strategies . . . must be contingent upon the unique organizational setting." (Passalacqua, 1981, p. 35). There is a faith that locally developed programs with teacher commitment and principal involvement will lead to desired outcomes.

Although a detailed review of the programs is the focus of Volume II, some program features are worth noting now. It is the general features and the processes for implementing them that are important when considering the feasibility of applying this research to secondary schools.

Program Features

There is not much novelty in the classrooms and corridors of effective schools. They are orderly, teachers are in their own classrooms teaching, children are in their seats and attentive to their work, and the principal is functioning as the instructional leader. What is new, say the researchers and program developers, is the attempt to develop these characteristics and

environments in schools in which they have not generally existed (Tomlinson, 1982). As we have mentioned earlier, however, the desire to be successful is greater than are the directions issuing from the research. Local efforts seem to depend on generous helpings of faith, common sense and hard work. buttressed by research on, and practical experience with, the implementation of educational innovations. This is a roll-up-the-shirt-sleeves effort, not a whiz-bang flash from which miracles will result.

We mention this at the outset to blunt another criticism. Purkey and Smith (1982) and Tomlinson (1982) among others find fault with this reform by saying that its proponents tout it as a quick and easy fix. Some districts may use it in this way, but conversations with practitioners involved in the process most often reveal the opposite. School people do not talk about the creation of an effective school as an innovation; they describe it as an on-going, long-term process that will alter beliefs, relationships and emphases in the school (Miller, 1981; conversations with school site people). They describe the effort as one that takes time and hard work and from which it is inappropriate to expect magnificent results immediately. One can doubt that the research base merits the high degree of faith, but the effort itself often sounds serious and comprehensive, demanding commitment rather than lip-service. Some of the seriousness may be a function of the first program feature.

1. School building staff commitment to the effort. Virtually all programs stress the importance of staff commitment to the creation of an effective school. Since effectiveness is a function of teacher and principal expectations and behaviors and a broadly understood instructional focus. It is not surprising that the consent if not the eager participation of

teachers would be critical. How do schools create that commitment where it does not now exist? Two approaches seem to be taken. In some districts, a school participates in a program only if the entire staff agrees to participate. In other words, school staffs volunteer and commitment is intrinsic. However in others, district administrators encourage or mandate participation. In Milwaukee, for example, administrators described some resistance to participate (and dismay at being named part of an ineffective school). However the feelings dissipated over time as a function of teacher acceptance (Larkin, 1982). In other districts, mandatory participation was thought to have led to less serious efforts and probably to less impressive impact (phone conversation with program people).

At the administrative level, commitment can be displayed by having the superintendent release teachers during the day for workshops and planning team time, rather than require them to contribute their own time to the program. Principals too may be given assistance with administrative managerial work in order to provide them with time to devote to instructional issues. Teacher, central office and principal commitment together are seen as key to starting to create the corsensus and climate of an effective school.

2. Developing high expectations. Early in most programs, workshops or awareness sessions are devoted to convincing the unconvinced 1) that all children can learn, and 2) that teacher expectations influence student achievement. The form of the sessions vary from brief reviews of research to more elaborate activities that help teachers assess their own beliefs and expectations. In the latter, more in-depth approach, teachers might observe each other and discuss, for example, patterns by which they call on children to answer questions. Teachers may learn that they call most

frequently on children likely to know the answers. An outside consultant might then help them understand the implications of such patterns (some children are no longer expected to know the answer, come to believe that they can't know the answer and no longer try), and provide techniques to alter teacher/student interactions. Whatever the approach, however, the effort to convince teachers that all children can learn, and that their expectations and related actions influence children's achievement, are a part of virtually all programs.

3. Effective classroom research. Although some programs do not focus much attention on helping teachers with their instructional skills, others depend heavily on the accumulating research on effective classrooms. Individual districts or school buildings select the particular kinds of information that they want, but generally the focus is on research that describes effective classrooms as those with "order, structure, purposefulness, a humane atmosphere, and the use of appropriate instructional techniques." (Purkey and Smith, 1982, p. 28) This set of effective classroom characteristics meshes nicely with the characteristics of effective schools, but leaves people wondering how to create those classrooms in their own schools. To provide assistance, outside experts are often brought in to discuss research findings on instructional strategies, mastery learning, time on task, individualizing instruction, teaching materials and classroom management (Mann, 1981), offering teachers strategies to try in their rooms.

The body of practical applications that has grown out of the research on effective teaching and classrooms is too large to review in this paper, however two points are worth mentioning as general cautions. First, although there is a literature on effective teaching, conclusions about what ought

to be done sometimes are based on what happened to be seen in classrooms and not on that empirical base. For example, Rutter reports greater academic outcomes in secondary schools with lessons in which teachers "spent higher proportions of their time interacting with the class as a whole, rather than with individual pupils." (Rutter et al., 1979, p. 116) One cannot infer from this observation, however, that whole class instruction is superior to an individualized approach. As the authors point out, they rarely saw classes with other than a whole class instructional format. What they learned was that achievement and other outcome measures were associated with different interaction patterns in whole group lessons. They did not investigate the relative benefits of a variety of instructional organizations.

Second, even if one looks at a broad range of research on effective instruction and classroom organization, the findings are not any more conclusive. Although there are many devotees of whole class instruction who can offer some evidence of its efficacy (Medley, 1977; Rosenshine, 1979; Dunn, 1979), others argue that individualized instruction can also be effective, and that effectiveness often depends on the teacher. Rossmiller for example concluded that "some teachers are much better than others at keeping students engaged 'and the instruction mode doesn't make a heck of a lot of difference'." (in Behling, 1979, p. 17) Medley also notes that "the characteristics of effective instruction vary by the social class background of the child," (in Mann, 1961) a finding with political implications for any improvement effort.

4. Outcome measures to determine effectiveness. Most schools are concerned with effectiveness measured by scores on standardized achievement

tests.[3/] Some districts use national, norm referenced tests; other, either alone or with the support of the SEA develop criterion referenced tests. Regardless of the specific measure, however, it is important to be clear about what effectiveness means. For the students in these schools, the poor and the minorities, effectiveness does not equal high academic quality. The goal is to achieve minimal, narrow (albeit important) measures of effectiveness, measures that would not be sufficient in middle-class schools. As Edmonds notes:

> Instructional effectiveness occurs when all students obtain at least minimum academic mastery as measured by standardized achievement tests. Academic quality occurs when students advance on measures of independent thinking, more sophisticated comprehension and other intangible measures of intellectual gain.
>
> (Edmonds, 1982, Airlie House, p. 2)

The goal then is ambitious, but not overly so. For in passing, at least for now, on developing "independent thinking and more sophisticated comprehension" skills associated with middle and upper middle class schools, it suggests different educational goals for different social classes.

The narrow measure of effectiveness also raises questions about the impact of the programs on students who are currently achieving quite well in schools that are not instructionally effective for many. If the instructional goals and practices recommended are appropriate for poor and minority children who have not been successful in schools, are they also appropriate for children who have been successful? Or will these practices provide less, rather than more for some children? Perhaps not, but little attention in the literature has been directed to high achieving students in these schools and their instructional needs.

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3. A second, frequently stated goal is improved student discipline. This is sometimes a primary goal at the secondary level.

5. Local program development. Program development usually begins with a few staff members reviewing and synthesizing the literature on effective schools and effective teaching, selecting what is relevant for their situation. Research knowledge that has been sifted carefully for its utility is a basic component of program development.

Reviews of the research are usually followed by local decisions about how to proceed: how to assess the school; what priorities to set; what strategies to employ; which people will lead the effort; and how to monitor and evaluate procedures and outcomes. Districts may employ the resources of state departments, universities, labs or neighboring school districts, but in the end, effective school programs are fashioned locally, tailored out of accumulated wisdom to fit building level conditions. Local development and high levels of participation are sensible given the weak state of the art of knowledge on how to create effective schools (Miles, 1981). In addition the process is a way to generate and maintain strong staff commitment and promote a high level of implementation.

In a sense, this reform strategy inverts a traditional process. Not too long ago, researchers studied school problems, described them and proposed solutions. Developers, who sometimes were the researchers, developed programs to ameliorate if not eliminate the problems. Then facilitators of various sorts tried to implement the improvement strategy in schools. It was an approach that was not always successful. In the current change effort, teachers and principals have the opportunity to pick the research, the priorities, and the strategies that speak to problems they have identified for themselves. They can reject or ignore the rest.

Summary. The program features described in this section concern attitudes, processes and techniques. Although they characterize effective school programs that are in elementary schools for the most part, they do have relevance for secondary schools. However secondary schools are organizationally distinct from elementary schools, suggesting that some new considerations and adaptations may be necessary in applying research on effective schools to secondary schools. We turn to some of these distinctions and their implications in the last section of the paper.

Considering Effective Secondary Schools

We began this paper with a question and we return to it now. What is an effective secondary school for poor and minority children? And furthermore, are its characteristics different from those of an effective elementary school? Research can answer the second question once there is some agreement on an answer to the first. As yet, there is no agreement on the first.

In order to achieve the definition of an effective elementary school, people had to agree that academic achievement at middle class levels was the appropriate criterion. This was a value judgment, not a research conclusion. There are many other criteria that could have been chosen. At this time, there is no definition of an effective high school along comparable limited, measurable dimensions, or along any others. And with the exception of the Rutter's (1979) work in London secondary schools and Firestone and Herriott's (1982) consideration of the organizational differences between elementary and secondary schools, we have found nothing that addresses these central issues.

Given the lack of a definition of an effective secondary school, and the paucity of research on effectiveness at this level, we review the

existing literature with the aim of raising questions. A more in-depth analysis of the implications of using the existing body of elementary school research as the basis for secondary school reform, and descriptions of ways in which programs are currently moving forward in secondary schools will appear as Volume III of this report (forthcoming).

The research base. Rutter et al. (1979) provide us with the research on which to base a discussion of effective secondary schools. There are two important advantages to their approach that are generally absent in the American elementary school studies. First, they were concerned with a range of outcomes--discipline, vandalism, attendance, for example as well as academic achievement. This orientation points us to the multiplicity of outcomes that schools can influence. Second, they used a longitudinal approach, studying their schools over a period of five years rather than taking a snapshot of effectiveness at a single point in time. If variables remain important and associated with outcomes over time, they will provide more credence to those thinking about creating them in their own schools.

In constructing the research in this more elaborate fashion, Rutter has pointed us to important questions that must be raised, but cannot yet be answered. High schools have many purposes for all students and different purposes for different sets of students. They provide vocational training, a terminal general academic program, and a college preparatory program. (This excludes all of the non-program functions and purposes that can be found in today's comprehensive high schools.) Should effectiveness be measured differently depending on the students' post high school goals? Should we expect diverse or similar academic outcomes from students in the same high school but in different programs? Should academic outcomes

be measured differently for poor and minority students in a heterogeneous high school? If academic achievement is the measure of effectiveness, what should be the instrument? The SAT or another test of achievement? And if we remain with limited academic measures, what are we saying about the importance of higher order thinking skills that have been relegated to the excellence domain in elementary schools? Are they to be included in a definition of effectiveness at the secondary level? Or omitted again?

Organizational considerations. If we move beyond the difficult definitional questions, we can consider the organizational differences between elementary and secondary schools that face researchers and developers as they try to design/adapt programs for secondary schools based on the elementary school experience. Again, our purpose in this section is to describe the differences and then raise questions that remain to be answered.

Firestone and Herriott (1982) considered some of the characteristics of effective schools (instructional goals and leadership for example) played out on a random sample of elementary and secondary schools.[4/] In comparing elementary and secondary schools on their major climate variable, "agreement on instructional goals," they used seven student outcomes (not listed in their report) and found only one difference related to the elementary/secondary distinction: "importance of emphasis on basic skills." More elementary teachers rank it as important (44%) than do secondary teachers (30%).

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4. Because the effective schools characteristics were not derived from middle-class or average schools, we do not know whether there are confounding variables that have influenced their findings with this random sample. In other words, this study does more than compare effective elementary and secondary schools for poor and minority students. It compares the range of elementary and secondary schools. Thus there is the potential for confusion raised by differences in the kinds of schools-by-social class--sample.

Firestone and Herriott suggest that this difference is a function of specialization at the secondary level. Given the special kinds of courses offered in secondary schools, basic skills may be an inappropriate focus for some teachers (art, music, home economics, foreign languages, vocational teachers, for example). But it's interesting to note that whatever the level, less than half of the teachers feel that an emphasis on basic skills is important, and on six out of the seven indicators of agreement on instructional goals, there was no difference between elementary and secondary teachers.

The authors also considered "instructional leadership" an important characteristic of elementary effective schools. Looking at four measures of leadership, they found one in which there was a difference between elementary and secondary schools: the principal seems to have less influence at the secondary school level over classroom instruction. This is partly due to school size; and partly due to time constraints that prevent the principal from attending to classroom issues. Firestone and Herriott found that influence over what is taught and which innovations are adopted is similar at both levels. Communication between principals and teachers is similarly infrequent at both levels.

It would be wrong to make broad generalizations from a single research study, but one implication suggested by this work is that although elementary and secondary schools have organizational differences, perhaps the characteristics of effectiveness are not very different, or at least are also present in secondary schools. However, their presence does not tell us whether they are associated with a measure of effectiveness, and, as mentioned earlier, there is as yet no measure of effectiveness for secondary schools for poor and minority students.

In drawing their own conclusions from the research, Firestone and Herriott lead us to ask other questions. They conclude that there is a greater sense of purpose in elementary schools as measured by an emphasis on basic skills. Perhaps, but would it be an improvement to have this emphasis in secondary schools, or would diverse academic goals make more sense?

They conclude that the principal has a greater opportunity to be the instructional leader in an elementary school. Again, perhaps, if direct involvement with classrooms and teachers is key. But can department chairpersons or assistant principals be instructional leaders? Or as Edmonds suggests, can groups of teachers fulfill this function? And to take the question a step farther, what kind of leadership structure makes a secondary school more effective?

Finally, they conclude that high schools are structurally looser than their elementary counterparts. But what about the structures of the departments? Are they structurally tight and does their organization have implications for instructional effectiveness? And what about some of the tightness imposed by the subject matter focus of teachers?

The Firestone and Herriott paper points us to important questions and suggests again the need for some definitions of effectiveness in secondary schools. Without the definitions, there are no standards against which to evaluate the interactions and emphases that are described.

Other organizational considerations. There are other organizational features of secondary schools that may be important when developing or identifying effectiveness, and we raise some of them briefly here to alert the reader to areas that need further work.

First is the reality of tracking or levelling. Currently different tracks require different amounts of work from students, set up different expectations, teach different kinds of content, and sometimes employ different teaching strategies (Oakes, 1980). How should these be considered when trying to create effective secondary schools? Second, in many high schools students choose the level of their classes, their teachers, and the amount of time they spend in school each day. Their choices reflect their own goals and priorities. For high school students who have jobs and other activities, school is not as central an activity as it may be to elementary students. What is the relationship between the students' goals and the effectiveness of the school? Would students with one set of goals find a school more or less effective in helping them achieve their goals than students with another set? Third, teachers are subject matter oriented at the secondary level, although they certainly are also concerned with the total development of students. However, given subject matter orientation, department structure and the size of secondary schools, teachers seem less oriented to a school-wide instructional focus than at the elementary level. What are the implications of this orientation? Fourth, at the elementary level one teacher has a class of students for the entire year. There is the opportunity to develop over time a classroom climate that is cohesive and effective. It is possible to develop effective classroom climates in secondary schools; but at the secondary level groups of children and teachers change every 50 minutes or so, and entire schedules may change two or three times a year depending on the length of a school term. These structural differences between elementary and secondary schools seem relevant to any consideration of the development of both school and classroom

climate. The situation in secondary schools is more fluid, and climates can't be built overnight.

CONCLUSION

There is no question that the process and attitude features of effective schools programs can be adapted to secondary schools. And there is little reason to think that involving secondary teachers in developing their own program of school improvement designed to make their school more effective would not generate some benefits to the students in the school. However, if one wants to look to a research base to justify those improvements and the direction of change, then weaknesses appear. At this time, there is no firm research base to guide improvement programs in the secondary schools. More critically, there is no agreement on what an effective secondary school should look like. The latter is not a research question, but merits spirited debate.

The research base for elementary school effectiveness exists but has the weaknesses described earlier. The result of some of the on-going improvement efforts should help to answer questions about the causal connections between the characteristics of effective schools and student outcomes. For the moment it seems prudent to consider modest aims for secondary schools when using this research as a guide (Gray, 1980).

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APPENDIX A

INGREDIENTS OF EFFECTIVE SCHOOLS*

1. Strong leadership by the school principal and designated others.

2. An evaluation system including student progress, staff, and the school itself.

3. Consensus on goals for the school; consensus on clearly understood teaching objectives and the priorities assigned to those objectives.

4. A considerable degree of autonomy for the school, allowing shared decision making by all those in the school community (parents, teachers, students, the principal). A meaningful level of participation by the parents.

5. Community involvement including utilization of available resources and responsiveness to the community.

6. A focus on achievement and high expectations for all students.

7. The school considering itself a problem-solving unit.

8. Harmony between research on the learner and learning process and practice.

9. In-service training and staff development for teaching staff.

10. A school climate that is orderly, serious, safe and attractive.

This and the next four pages are taken from "Effective Schools: A positive force in the northeast", produced by the Northeast Regional Exchange, Chelmsford, MA.

*Report on Symposium on Effective Schools
National Committee for Citizens in Education
Columbia, Maryland, June, 1980.

CHARACTERISTICS OF AN EFFECTIVE SCHOOL

1. Safe and Orderly Environment

   There is an orderaly atmosphere which is free from the threat of physical harm or intimidation and is conducive to teaching and learning.

2. Strong Instructional Leadership

   The principal acts as the instructional leader who effectively communicates the mission of the school to staff, parents and students and who understands and applies the characteristics of instructional effectiveness in working with the school communities.

3. High Expectations

   The school displays a climate of expectation in which the staff believes and demonstrates that students can reach extended levels of achievement and that they (the staff) have the capacity and responsibility to deliver the required instructional program.

4. Clear School Mission

   There is a clearly-articulated mission of the school through which the staff shares an understanding and committment to instructional goals, priorities, assessment procedures and accountability.

5. Opportunities to Learn and Time on Task

   A significant amount of school time is devoted to providing opportunities for direct student participation in learning activity. Instructional time on task is observed, monitored and modified by school staff.

6. Frequent Monitoring of Pupil Progress

   Pupil progress is frequently monitored through several methods ranging from traditional practices of teacher-made testing to use of sophisticated methods of criterion referenced or standardized evaluations.

7. Parental and Community Involvement

   The staff seeks to bring parents into a co-active role in achieving the instructional goals of the school.

EFFECTIVE SCHOOLS: A SUMMARY OF RECENT RESEARCH

Most recent research agrees that there are a few important characteristics of "good" schools. Whether one uses an objective measure, such as student achievement, or a subjective measure, such as the school's reputation, these factors appear and reappear in the schools that are recognized as effective.

In general, these factors have to do with the leadership and "climate" of the school, and the curriculum and instruction.

In the effective school, the teacher:

- focuses on small units of learning
- doesn't allow the student to progress to step two until step one has been learned
- continually evaluates student learning to determine whether she/he understands and is ready to move on
- does not allow students to fall behind, but instead ensures student success
- emphasizes the basic skills of reading and math
- states clearly to students the instructional goals so students know what is expected
- has high expectations for all students
- tells the student clearly and immediately when the student does or does not understand the instruction
- does not label children
- focuses student attention on the instruction at hand
- spends a minimum amount of time on non-instructional activities (handing out papers, arranging seats, discipline) and a maximum amount of time on actual instruction (as opposed to drill-work, seat-work, workbooks, etc.)
- is involved in and committed to the total school operation and thereby sets an example to students
- does not rely on a single curriculum or a single teaching technique
- teaches students not just <u>what</u> to learn, but <u>how</u> to learn

In an effective school, the principal:

- is the educational leader
- establishes clear priorities and involves teachers in decision-making
- sets clear rules and applies them consistently
- emphasizes achievement and evaluation of basic objectives
- spends time in the classroom, teaching and observing
- has the ability to delegate and has faith in the competency of others
- has high expectations of teachers and makes clear to teachers what is expected
- is able to adjust his/her leadership style according to the situation
- has central office support
- concentrates on program development
- involves students in the operation of the school and makes them responsible for aspects of the operation
- gains community support
- makes it as easy as possible for teachers to spend their time teaching
- sets an example to students and faculty that learning is the most important work of the school (and doesn't, for example, interrupt instruction with messages over the intercom)

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ASSOCIATED WITH SCHOOL OUTCOMES *

School Processes	Measures
Academic Emphasis	Homework was frequently assigned by teachers
	Administrators checked that teachers assigned homework
	Teachers expected students to pass national exams
	Work displayed on classroom walls
	Proportion of school week devoted to teaching
	Proportion of students reporting library use
	Course planning done by groups of teachers
Skills of Teachers	Experienced teachers had higher proportion of time spent on task
	Inexperienced teachers in above average schools developed classroom management skills more easily and quickly
Teachers Actions in Lessons	Teachers spent more time on lesson topic
	Teachers spent less time with equipment, discipline and handing out papers
	Teachers interacted with class as a whole
	Teachers provided time for periods of quiet work
	Teachers ended lessons on time
Rewards and Punishments	
Punishment	Generally recognized and accepted standards of discipline uniformly enforced by leaders
Rewards	Teachers praised work in class
	Public praise of pupils in meetings
	Display of work on walls
Pupil Conditions	Access to telephone, provisions of hot drinks, etc.
	Care and decoration of classroom
	Provision of school outings
	Students approach staff member about a personal problem
	Teachers would see students at any time
Responsibility and Participation	Proportion of students holding leadership positions
	Student participation in assemblies
	Students participated in charity organized by school
	Students brought books and pencils to class
Staff Organization	Teachers planned courses jointly
	Teachers said they had adequate clerical help
	Administration checked to see that teachers gave homework
	Administration aware of staff punctuality
	Teachers felt their views were represented in decision making

* Characteristics of Effective Schools: The Importance of School Processes, David A. Squires, Research for Better Schools, Philadelphia, 1980.

EFFECTIVE SCHOOLS

Listed here are the characteristics of schools that exist right now and have increased student achievement.

The research: The Rand Report, Stuart Rankin, Klitzgaard and Hall, Ronald Edmonds, Walter Brookover and Lawrence Lezotte

The findings:

- effective schools hold high expectations for students and teachers
- effective schools monitor student progress carefully, report results and use them to improve teaching
- effective schools maintain an academic emphasis and students have the opportunity to learn expected content
- effective schools use materials at the appropriate level of difficulty
- effective schools maintain more praise than criticism
- effective schools assure adequate time-on-task through teacher planning and classroom management
- effective schools have strong, successful programs in the early grades - a longer instructional day, with a strict basic skills curriculum
- effective schools exhibit an orderly environment and maintain uniform standards for discipline
- effective school principals exhibit strong leadership qualities
- effective schools recognize and understand cultural differences in children

This and the next three pages are taken from Mullikan, Thomas,"Approaching the Research on Effective Schools and Effective Classrooms" Pennsylvania Department of Education, May 1982

EFFECTIVE SECONDARY SCHOOLS

Walter Brookover, of the University of Michigan, has researched effective secondary schools and found the following variables:

- a belief that students can learn
- a belief that teachers can teach their students
- a belief by students that they can learn and be successful in school
- high expectations for student success and high academic standards
- clear norms of appropriate behavior
- a manageable school size
- a principal who is an assertive instructional leader
- a teacher as instructor to all students and responsible for learning
- a student as learner with the stress on academic achievement and appropriate behavior
- clear and sought after school goals and objectives
- reinforcement - rewards and praise for students
- direct, whole group instruction
- increased time-on-task
- regular monitoring or assessment of student learning and school effectiveness
- student team cooperation and learning

EFFECTIVE RURAL SCHOOLS

In addition to the characteristics for effective schools, the following have been found to describe successes in a variety of rural settings:

The research: The Journalism Research Fellowship Report, National School Public Relations Association.

The findings:

- effective rural schools assess community social dynamics to develop "grass roots efforts" for approaching learning
- rural school issues are community issues
- rural schools maintain total immersion in the community
- rural school curriculum, while emphasizing the academics, provides skills, attitudes and understandings for a real world
- rural schools maintain effective career education and work study programs
- after-school activities are often conducted by members of the community (sewing, choir, football)
- effective rural secondary schools encourage adults to attend classes
- students work together, with older students helping younger ones (particuarly in elementary schools)
- effective rural schools take advantage of their setting and maintain environmental education programs
- effective rural school districts work together, pulling resources from a central location (e.g. intermediate units, central computer centers, public television) and tend to share specialized staff
- effective rural schools maintain a strict discipline code
- staff in effective rural schools tend to live in and be a part of the community
- effective rural schools provide on-going staff development and growth

EFFECTIVE URBAN SCHOOLS

In addition to the research for school effectiveness listed on p. 3, most of which was conducted in urban settings, specific variables stand out in many of the schools.

The research: Ronald Edmonds, Federal Reserve Bank Study, Walter Brookover and Lawrence Lezotte.

The findings:

- an instructional emphasis on basic skills
- a school climate conducive to learning
- an ongoing assessment of pupil progress
- high expectations for student learning; no children are permitted to fall below realistic levels of achievement
- strong school leadership and support
- the knowledge and use of appropriate principles of learning
- an instructional emphasis and commitment to teaching and learning the basic skills
  - including social studies, reading, language development and science*
  - with less allocated time for mathematics, physical education and health*
  - with a large number of adult volunteers in mathematics classes*
- high levels of parent involvement
- limited use of classroom instructional groups
- fewer paid aides in reading classes*

*See Edmonds, R., Effective schools for the urban poor. Educational Leadership, October, 1978, pp. 15-24.

The following characteristics were identified as strongly associated with secondary school effectiveness. (Rutter,M. et al. Fifteen Thousand Hours: Secondary Schools and their Effects on Children. Cambridge, MA: Harvard University Press, 1979.

Lessons were prepared in advance.

The whole class was taught.

Pupils were kept actively engaged.

High expectations were the order of the day.

School personnel modeled good behavior.

Students obtained feedback about acceptable behavior.

School personnel used a lot of praise.

This list was taken from Behling, H.E., Jr. "What Research Says About About Effective Schools and Effective Classrooms" Northeast Regional Exchange, Chelmsford, MA. 1981

From: Larkin, Maureen McCormack and Kritek, William J. "Milwaukee's Project RISE". Educational Leadership, Volume 40, Number 3, December 1982.

Figure 1. The Essential Elements of Effective Schooling.

A. School Climate
1. Strong sense of academic mission
2. High expectations conveyed to all students
3. Strong sense of student identification/affiliation
4. High level of professional collegiality among staff
5. Recognition of personal/academic excellence

B. Curriculum
1. Grade level expectations and standards in reading, math, and language
2. Planning and monitoring for full content coverage

C. Instruction
1. Efficient classroom management through structured learning environment
2. Academic priority evidenced in increased amount of allocated time
3. Key instructional behaviors (review and homework check developmental lesson, process/product check, actively monitored seatwork, related homework assignment)
4. Direct instruction as the main pedagogical approach
5. Maximizing academic engaged time (time-on-task)
6. Use of the accelerated learning approach (planning for more than one year's growth)
7. Reading, math, and language instruction beginning at the kindergarten level

D. Coordination of Supportive Services
1. Instructional approach, curriculum content, and materials of supplementary instructional services coordinated with the classroom program
2. Pull-out approach used only if it does not fragment the classroom instructional program, does not result in lower expectations for some students, and does not interfere with efforts to maximize the use of time

E. Evaluation
1. Frequent assessment of student progress on a routine basis
2. Precise and informative report card with emphasis on acquisition of basic school skills
3. Serious attitude towards test-taking as an affirmation of individual accomplishment
4. Test-taking preparation and skills

F. Parent and Community Support.
1. Regular and consistent communication with parents
2. Clearly defined homework policy which is explained to students and parents
3. Emphasis upon the importance of regular school attendance
4. Clear communication to parents regarding the school's expectations related to behavioral standards
5. Increasing awareness of community services available to reinforce and extend student learning